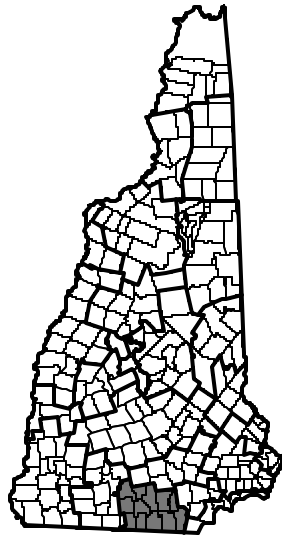


# Nashua Healthcare Service Area Regional Health Profile



This narrative is part of a larger effort, the *New Hampshire Regional Health Profiles*, and grew out of a mandate established by the Legislature in its passage of SB 183 in 1999. That bill amended RSA 126A to include a requirement for the Department of Health and Human Services to continually assess the health status of the State's residents and to make its findings available in a report issued every two years.

This narrative was jointly developed by the Dartmouth Hitchcock Alliance and the Department and is the first to be issued under this legislation. The *Regional Profiles* provide a means for residents, community leaders, planners and providers to gain a better understanding of the health status of the State's residents and communities.

The *Regional Profiles* provides information that can be used to establish local *Healthy New Hampshire 2010* targets and to meet the needs assessment expectations of the State's Community Benefits legislation

## Overview of the HSA

The Nashua Healthcare Service Area (HSA) consists of eleven towns and the City of Nashua. Because of the size of Nashua, this profile describes the full HSA, the City of Nashua, and the balance of the Nashua HSA Communities, permitting readers to gauge the impact of the City on the HSA's health status.

Compared with New Hampshire as a whole, the residents of Nashua HSA are slightly younger than the rest of the State, with the largest portion being adults from 25-44. There are somewhat fewer people between 18 and 24 as a proportion of the population when compared with New Hampshire overall. The figure below presents a comparison of the HSA and State population.

Town Name	1998 Pop Est	% of HSA Pop	% of HSA Self Pay Admissions	Ratio of Self-Pay Admissions to Pop Pct	1996 Per Capita Income	Pop Density (persons per sq. mi.)	Miles to Nearest Hospital*
Nashua City	83,209	47%	66%	1.4	\$21,742	2,706	-
Amherst	10,229	6%	2%	0.4	\$33,987	301	14
Brookline	3,408	2%	1%	0.7	\$25,069	171	14
Hollis	6,760	4%	2%	0.4	\$35,835	213	9
Hudson	21,723	12%	8%	0.7	\$21,332	761	1
Litchfield	6,844	4%	1%	0.3	\$20,960	459	8
Lyndeborough	1,461	1%	1%	1.4	\$19,352	49	23
Mason	1,288	1%	0%	0.0	\$20,439	54	17
Merrimack	23,899	14%	6%	0.5	\$23,426	733	11
Milford	12,859	7%	9%	1.2	\$19,779	506	11
Mont Vernon	1,982	1%	1%	0.8	\$25,372	118	16
Wilton	3,332	2%	2%	1.2	\$21,832	130	16
<b>HSA Total</b>	<b>176,994</b>				<b>\$23,069</b>	<b>563</b>	
New Hampshire	1,185,000				\$18,697	132	

\* = Nearest Hospital may be in a different HSA

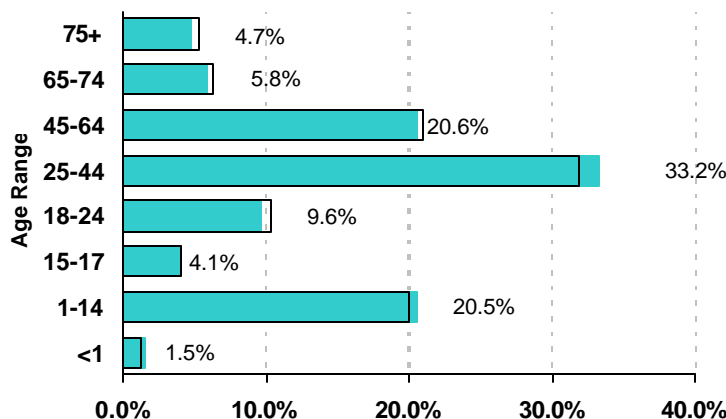
- 1998 Population Estimate = New Hampshire Office of State Planning.
- Percent of HSA Self Pay Admissions = Each community's share of individual overnight hospital admissions for the full HSA that are recorded as "Self Pay" on the Uniform Hospital Discharge Data Set for 1998.
- Ratio of Self-Pay Admissions to Population Percentage = Percent of HSA self-pay admissions divided by the percent of HSA population. A higher ratio reflects a greater proportion of individuals within a community who must cover the costs of hospitalization from their personal resources, i.e., they do not have health insurance coverage for the hospitalization.
- 1996 Per Capita Income = Office of State Planning, from the Department of Revenue Administration.
- Population Density = Total square miles from the Office of State Planning, divided by the 1998 Population Estimate.
- Miles to Nearest Hospital = mileage from a community to the nearest hospital that may not be the hospital(s) in the HSA, as given in the *1999 New Hampshire Community Profiles*, published by the State Occupational Information Coordinating Committee (SOICC) of New Hampshire.

## Demographic Profile

### Percentage of Population by Age

Shaded and Labeled bars = HSA population profile

Outlined bar = State population profile



Graphics are based on data provided in the Primary Care Data Set, 1993-1997, which stated “State, city, and town population counts for New Hampshire have been obtained by applying the proportions from the 1995 New Hampshire Population Projections for Counties by Age and Sex to the 1995 Population Estimates of New Hampshire Cities and Towns; both of which were prepared by the New Hampshire Office of State Planning (OSP). The population figures for 1995 were chosen for use in calculating rates since this year represents the midpoint of the five years of study, 1993 through 1997... Since the town-specific age and sex population estimates are based on town-wide estimates applied to county level projections, it is assumed that there is an unknown amount of error in the individual components of the estimates. However, when combining towns together to construct HSAs, much of the variability in the town-specific estimates is assumed to be canceled.” *Primary Care Access Data, 1993-1997*

Limited data on population and households from the national 2000 census is provided in the Census 2000 section of the *Regional Profiles*. That data will be updated at the *Regional Profiles* website as it becomes available and should be used when reviewing the “Additional Indicators” section below.

## Health Profile

The points offered below are provided as an overview of the health of the HSA in the three **Regional Profile** focus areas: *Current Health*, *Use of Health Care* and *Risks to Future Health*. These are provided as a representative sample of findings presented in the data tables and should not be construed as the most important findings. Readers are urged to review the data tables to better understand the conditions and circumstances of this HSA.

In some instances, the differences between the HSA and the State are described as significant. This refers to a difference being “statistically significant.”

- When the source of the data is the 1999 NH Health Insurance Coverage and Access Survey (NH HICAS), the difference is significant at the 95% confidence level, i.e., when the range between the upper and lower confidence intervals for the HSA is higher or lower than the range for the State confidence interval (the confidence ranges do not overlap).
- When the source of data is the Primary Care Access Data set (PCAD), a difference is also significant at the 95% confidence level, based on a “z test score,” a test for statistical significance, i.e., when this test statistic is “significant,” there is 95% confidence that the rates being compared are different for reasons other than “random chance.”
- Because a finding is statistically significant, i.e., not due to chance alone, the difference may not be of sufficient magnitude to be practical or meaningful to understanding the health issue or for developing strategies.
- A finding that a difference is not statistically significant may not mean that there is no value to paying attention to the difference, i.e., not being statistically significant does not mean that it is not important or necessary to consider the underlying health issues for indicators that are different between the HSA and the State, particularly on indicators that seem to show a trend or relationship, such as between indicators associated with births.

All rates in this narrative have been age-adjusted. The calculation of age-adjusted rates makes it possible to compare the rates between an HSA and the State. The proportion of the population in each age range varies from HSA to HSA and between an HSA and the State. Thus, it would be misleading to compare HSA rates to the State rate unless the rates were adjusted for this variation in the distribution of age ranges.

Please refer the *Technical Notes* section for an explanation of the age-adjustment calculation and the calculations for statistical significance and confidence intervals.

Unless noted in the text, the data date and source are given in [ ] at the end of each point. Key to abbreviations:

- NHES = New Hampshire Employment Security.
- NH HICAS = *New Hampshire Health Insurance Coverage and Access Survey, 1999*; Office of Planning and Research, Department of Health and Human Services.
- PCAD = *Assessing New Hampshire's Communities: Primary Care Access Data, 1993-1997*; Health Statistics and Data Management Bureau, Office of Community and Public Health.
- UHDDS = Uniform Hospital Discharge Data Set, maintained by the Health Statistics and Data Management Bureau, Office of Community and Public Health.
- US Census = Taken from 1990 Census of Population and Housing Summary Tape File 3A (STF3A), 1990 US Census data, US Department of Commerce.

## Observations on Current Health

- 95.9% of the HSA population under age 65 had a health status of “good,” “very good” or “excellent,” according to the 1999 NH Health Insurance Coverage and Access Survey. This was comparable to the State average of 94.8%. Due to sample size, no comparable data is available on Nashua City and the rest of the Nashua HSA Communities.
- 6.8% of the HSA population under age 65 had a chronic condition lasting more than one year at the time of the 1999 NH Health Insurance Coverage and Access Survey. The State average (5.9%) was less. Due to sample size, no comparable data is available on Nashua City and the rest of the Nashua HSA Communities
- 2.4% of HSA residents between the ages of 16 and 64 had a disability and were not in the labor force. The State rate was 2.9%. [1990; US Census]
  - ✓ 2.8% of the residents between 16 and 64 in Nashua City had a disability and were not in the labor force.
  - ✓ 2.0% of the residents between 16 and 64 in the Nashua HSA Communities had a disability and were not in the labor force.
- The HSA rate of “premature deaths” (deaths between 18 and 64) was significantly lower compared to the State rate (2.0 per 1000 population ages 18 to 64 vs. 2.6 per 1000 population). [1993-1997; PCAD]
  - ✓ The rate of “premature deaths” in Nashua City was 2.3 per 1000 population ages 18 to 64. This was not significantly different than the State rate.
  - ✓ The rate of “premature deaths” in the Nashua HSA Communities was significantly lower (1.8 per 1000 population ages 18 to 64) than the State rate.
- Compared to the State the Nashua HSA had significantly lower rates of heart disease mortality (3.0 per 1000 population 25 and older vs. 3.9 per 1000 population 25 and older) and mortality from all cancers (2.8 per 1000 population 25 and older vs. 3.2 per 1000 population 25 and older). [1993-1997; PCAD]
  - ✓ The Nashua City rate of heart disease mortality was 3.7 per 1000 population 25 and older. The cancer mortality rate (all cancers) was 3.3 per 1000 population 25 and older.
  - ✓ The rates of heart disease and cancer mortality (all cancers) in the Nashua HSA Communities were significantly lower than the State rates (heart disease: 2.4 per 1000 population 25 and older and cancer mortality: 2.3 per 1000 population 25 and older).
- The rate of low birth weight births in the Nashua HSA was 50 per 1000 live births. This was comparable to the State rate of 52 per 1000 live births. [1993-1997; PCAD]
  - ✓ The rate of low birth weight births in Nashua City was 54 per 1000 live births.
  - ✓ The rate of low birth weight births in the Nashua HSA Communities was 47.8 per 1000 live births.

**Observations on Use of Health Care:**

- According to the 1999 NH Health Insurance Coverage and Access Survey 19.4% of the Nashua HSA population under age 65 were not “extremely” or “very” confident in their access to health care. This was comparable to the State average of 19%. Due to sample size, no comparable data is available on Nashua City and the rest of the Nashua HSA Communities. [1999; NH HICAS]
- According to the findings of the 1999 NH Health Insurance Coverage and Access Survey 6.3% of the population under age 65 in the Nashua HSA did not have a usual source of medical care. This proportion was lower than, but not significantly different from the State average of 6.9%. Due to sample size, no comparable data is available on Nashua City and the rest of the Nashua HSA Communities.
- 11.5% of the population under age 65 in the Nashua HSA did not have a physician visit in the year prior to the 1999 NH Health Insurance Coverage and Access Survey. This was less, but not significantly different from the State rate of 11.7%. Due to sample size, no comparable data is available on Nashua City and the rest of the Nashua HSA Communities.
- 22.2% of the population under age 65 in the HSA did not have a dental visit in the year prior to the 1999 NH Health Insurance Coverage and Access Survey. This was comparable to the State average of 21.9%. Due to sample size, no comparable data is available on Nashua City and the rest of the Nashua HSA Communities.

**Ambulatory Care Sensitive Conditions** = medical conditions that may not require inpatient hospitalization (a stay of at least one night) if timely and appropriate primary care is received.

- The HSA rate of hospital admissions for rapid onset ambulatory care sensitive conditions, such as pneumonia and other infections was significantly lower than the State rate (5.5 per 1000 population vs. 7.4 per 1000 population). [1993-1998; UHDDS]
  - ✓ The rate for Nashua City was 6.1 per 1000 population. This was significantly lower than the State rate.
  - ✓ The rate for Nashua HSA Communities was 5.1 per 1000 population. This was significantly lower than the State rate.
- The HSA rate of hospital admissions for chronic ambulatory care sensitive conditions, such as asthma and diabetes, was 3.3 per 1000. This was significantly lower than the State rate of 4.6 per 1000 population. [1993-1998; PCAD]
  - ✓ The rate for Nashua City was 3.8 per 1000 population. This was significantly lower than the State rate.
  - ✓ The rate for the Nashua HSA Communities was 2.8 per 1000. This was statistically lower than the State rate.

- The HSA rate of hospital ambulatory care sensitive admissions (per 1000 population) for children was comparable to the State rate. The HSA rates for adult and elderly admissions were significantly lower than the State rates. [1993-1997; PCAD]

	<b>HSA</b>	<b>State</b>	<b>Ratio (HSA/State)</b>
Pediatric	4.3	4.3	1.0
Adult*	5.2	6.1	0.9
Elder*	44.2	57.4	0.8

(Pediatric = up to age 18; Adult = 18-64; Elder = 65+)

\* = Significantly lower

- ✓ Nashua City:  
Pediatric rate, 4.6 – ratio: 1.1  
Adult rate, 6.2 – ratio: 1.0  
Elderly rate, 54.1 - ratio: 0.9
- ✓ Nashua HSA Communities:  
Pediatric rate, 4.0 – ratio: 0.9  
Adult rate, 4.3\* - ratio: 0.7  
Elderly rate, 35.2\* - ratio: 0.6  
\* = Significantly lower than State rate

- The HSA rates of hospital admissions (per 1000 population) for injuries for three major age categories were lower than the State rates [1993-1997; PCAD]

	<b>HSA</b>	<b>State</b>	<b>Ratio (HSA/State)</b>
Pediatric	2.8	3.0	0.9
Adult*	5.3	6.2	0.9
Elder*	19.2	26.2	0.7

(Pediatric = up to age 18; Adult = 18-64; Elder = 65+)

\* = Significantly lower than the State rate

- ✓ Nashua City:  
Pediatric rate, 2.6 – ratio: 0.9  
Adult rate, 5.6 – ratio: 0.9  
Elderly rate, 23.9 - ratio: 0.9
- ✓ Nashua HSA Communities:  
Pediatric rate, 2.9 – ratio: 1.0  
Adult rate, 4.9\* - ratio: 0.8  
Elderly rate, 14.9\* - ratio: 0.5  
\* = Significantly lower than State rate

## Observations on Risks to Future Health

- In 1999 unemployment in this HSA was 29%. This was higher than the State average of 2.7%. [NHES]
- According to the 1999 NH Health Insurance Coverage and Access Survey the percent of families with incomes of less than 200% of the federal poverty level was 14.7%. This was significantly lower than the State average of 21.4%. Due to sample size, no comparable data is available on Nashua City and the rest of the Nashua HSA Communities.
- 6.7% of the children under age 19 in the HSA received Medicaid and/or Food Stamp benefits. This was significantly lower than the State average of 9.1%. [1993-1997; PCAD]
  - ✓ For Nashua City the proportion of children receiving Medicaid and/or Food Stamp benefits (9.8%) was significantly higher than the State average.
  - ✓ For the Nashua HSA Communities the proportion of children receiving Medicaid and/or Food Stamp benefits (4.0%) was significantly lower than the State average.

- 1.4% of adults in the HSA received Medicaid and/or Food Stamp benefits. This was significantly lower than the State average of 2.1%. [1993-1997; PCAD]
  - ✓ For Nashua City the average of adults receiving Medicaid and/or Food Stamp benefits was 2.0%.
  - ✓ For the Nashua HSA Communities, the average of adults receiving Medicaid and/or Food Stamp benefits was 0.9%. This was significantly lower than the State average.
- The HSA percent of adults under age 65 who had completed High School was 94.5%. This was comparable to the State average of 92.2%. Due to sample size, no comparable data is available on Nashua City and the rest of the Nashua HSA Communities. [1999; NH HICAS]
- Selected birth characteristics for this HSA:
  - ✓ The rate of mothers smoking during pregnancy was 148 per 1000 live births. This was significantly lower than the State rate of 176 per 1000 live births. [1993-1997; PCAD]
    - ✓ The rate of maternal smoking for Nashua City was 185 per 1000 live births.
    - ✓ The rate of maternal smoking for the Nashua HSA Communities was 114 per 1000 live births. This was significantly lower than the State rate.
  - ✓ The rate of mothers who received late or no prenatal care was 11 per 1000 live births. This was significantly lower than the State rate of 17 per 1000 live births. [1993-1997; PCAD]
    - ✓ The rate of births with no or late prenatal care in Nashua City was 11 per 1000 live births. This was significantly lower than the State rate.
    - ✓ The rate of births with no or late prenatal care in the Nashua HSA Communities was 9.6 per 1000 live births. This was significantly lower than the State rate.
  - ✓ The rate of births to teen mothers under age 18 was 14.7 per 1000 live births. This was comparable to the State rate of 14.4 per 1000 live births. [1993-1997; PCAD]
    - ✓ The rate of teen births in Nashua City was 20.5 per 1000 live births. This was significantly higher than the State rate.
    - ✓ The rate of teen births in the Nashua HSA Communities was 9.3 per 1000 live births. This was significantly lower than the State rate.
  - ✓ The rate of births to unmarried mothers was 185 per 1000 live births. This was significantly lower than the State rate of 223 per 1000 live births. [1993-1997; PCAD]
    - ✓ The rate of births to unmarried mothers in Nashua City was 254 per 1000 live births. This was significantly higher than the State rate.
    - ✓ The rate of births to unmarried mothers in the Nashua HSA Communities was 121.3 per 1000 live births. This was significantly lower than the State rate.



- ✓ The rate of births to mothers with less than 12 years of education was 100 per 1000 live births. This was significantly lower than the State rate of 109 per 1000 live births. [1993-1997; PCAD]
  - ✓ The rate of births to mothers with less than 12 years of education in Nashua City was 155 per 1000 live births. This was significantly higher than the State rate.
  - ✓ The rate of births to mothers with less than 12 years of education in the Nashua HSA Communities was 50.0 per 1000 live births. This was significantly lower than the State rate.
- ✓ The rate of births covered by Medicaid was 151 per 1000 live births. This was significantly lower than to the State rate of 207 per 1000 live births. [1993-1997; PCAD]
  - ✓ The rate of births covered by Medicaid in Nashua City was 227 per 1000 live births. This was significantly higher than the State rate.
  - ✓ The rate of births covered by Medicaid in the Nashua HSA Communities was 79.2 per 1000 live births. This was significantly lower than the State rate.
- 9.6% of the HSA population under age 65 did not have health insurance for some portion of the year prior to the 1999 NH Health Insurance Coverage and Access Survey. This was less than the State rate of 11.4%. Due to sample size, no comparable data is available on Nashua City and the rest of the Nashua HSA Communities.
- 7.9% of the population under age 65 in the HSA did not have health insurance coverage at the time of the 1999 NH Health Insurance Coverage and Access Survey. This was less than the State rate of 9.3%. Due to sample size, no comparable data is available on Nashua City and the rest of the Nashua HSA Communities.
- 22.3% of the population under age 65 in the HSA did not have dental coverage at the time of the 1999 NH Health Insurance Coverage and Access Survey. This was lower than the State rate of 25.7%. Due to sample size, no comparable data is available on Nashua City and the rest of the Nashua HSA Communities.

## Additional Observations

By reviewing census data, it is possible to learn much about the people living in a community. Unfortunately, the most recent census available is from the 1990 US Census. It will be helpful to compare data from the 2000 census (which is underway) to that from 1990 to see how this HSA has changed in terms of:

- Households with children headed by single parents – In 1990 14.8% of households with children in the HSA were headed by a single parent (female headed: 11.6%; male headed: 3.1%). The State average was 17% of households headed by a single parent (13.1% were female headed and 3.9% were male headed). [1990; US Census]
  - ✓ In Nashua City 19.3% of households with children were headed by a single parent: 15.1% were female headed and 4.2% were male headed
  - ✓ In the Nashua HSA Communities 11.1% of households with children were headed by a single parent: 8.8% were female headed and 2.3% were male headed.

- Income distribution – In 1990 9.8% of the families in the HSA had incomes below \$20,000 and 50.4% of the families in the HSA had incomes greater than \$50,000. The State average was 15.2% of families with incomes below \$20,000 and 37.0% of families with incomes greater than \$50,000. [1990; US Census]
  - ✓ In Nashua City 13.2% of the families had incomes below \$20,000 and 45.1% had incomes above \$50,000.
  - ✓ In the Nashua HSA Communities 6.8% of the families had incomes less than \$20,000 and 55.4% had incomes of more than \$50,000.
  
- People isolated by virtue of:
  - ✓ Living alone – In this HSA 19.7% of the households were classified as “single person” compared to the State average of 22%. [1990; US Census]
    - ✓ In Nashua City 24.8% of households were classified as “single person.”
    - ✓ In the Nashua HSA Communities 14.1% of households were classified as “single person.”
  - ✓ Not speaking English – In this HSA 2.1% of the households were linguistically isolated compared to the State average of 1.5%. [1990; US Census]
    - ✓ In Nashua City 3.1% of the households were linguistically isolated.
    - ✓ In the Nashua HSA Communities 1.1% of the households were linguistically isolated.
  - ✓ Not owning a vehicle – In this HSA 14.9% of the population did not have personal transportation compared to a State average of 16.1%. [1990; US Census]
    - ✓ In Nashua City 16.9% of the population did not have personal transportation available.
    - ✓ In the Nashua HSA Communities 9.9% of the population did not have personal transportation available.
  
- Population stability, as reflected in:
  - ✓ Not relocated over the last 5 years – In this HSA 45.6% of the households lived in the same location at least 5 years compared to the State average of 47.8%. [1990; US Census]
    - ✓ In Nashua City 43% of the households lived in the same location at least 5 years.
    - ✓ In the Nashua HSA Communities 48.2% of the households lived in the same location at least 5 years.
  - ✓ Owned a home rather than rented – In this HSA 73.3% of the population lived in owner-occupied housing compared to the State average of 74%. [1990; US Census]
    - ✓ In Nashua City 62.3% of the population lived in owner-occupied housing.
    - ✓ In the Nashua HSA Communities 83.8% of the population lived in owner occupied housing.